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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,598

09/22/2003

Fumio Kubo

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

NOTIFICATION DATE

DELIVERY MODE

07/30/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/665,598

Applicant(s)

KUBO ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007 and 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/2/2007 has been entered.

Response to Arguments

Applicant's arguments filed 5/2/2007 have been fully considered but they are not persuasive. A response to Applicants arguments pertaining to the placement of optical sensors in the apparatus of Brand et al or Kazuichi et al has been given in the previous Advisory Action. As a further comment, the prior art was used to provide a teaching that optical sensors are known to be used to detect accumulations of material in a passage and to provide a signal or warning as a result of the detection, thus solving a similar problem. Knowing of the problem of stagnation in the separation passage (admitted known prior art), one of ordinary skill in the art would have been capable of determining the proper location of sensor(s) in the front, back or side walls of the separation passage of a shredded tobacco feeding machine to most efficiently detect stagnation of the tobacco in the passage and provide a signal to either unclog the passage and/or an alert signal to an operator.

The rejections are maintained but have been modified to include a machine translation of a publication of the prior cited art of Kazuichi et al, JP-2000-060522-A. In addition, a new reference is included to further demonstrate that it was well known in the art to use vibration to break up accumulations of matter in passageways.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The new amendments to the claim recite "a direction along said feed passage". However, the feed passage has a curved wall that varies from a horizontal to a vertical direction. It is not clear whether the claimed direction along the feed passage refers to the horizontal direction, the vertical direction

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brand et al (5645086) or Kazuichi et al (JP 2957173, machine translation of JP

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Publication No. 2000-060522-A referenced in rejection) in view of Okumoto et al (EP 0165080) and further in view of Labbe et al (4121596) and Rossi (4117647).

Brand et al discloses a shredded tobacco feeding apparatus for a cigarette manufacturing process (Figure, cols 3-6) comprising:

- a feed passage extending to the tobacco band of the cigarette manufacturing machine (ref. nos. 24 and 52; col 4, lines 19-23; col 5, lines 29-34),

- supply means causing the shredded tobacco to fall to an inlet of the feed passage (ref. no. 11; col 3, lines 37-47),

- pneumatic transport means for producing a flow of air in the feed passage toward the suction surface of the tobacco band (ref. no. 14; col 3, lines 47-57),

- a separation chute having an upper end opening in the vicinity of the feed passage inlet (area between plenum 13 and rotary wheel gate 17; col 3, lines 56-59),

- a separation passage opening into the feed passage downstream of the separation chute and having a lower end opening downward and having front and rear walls apart from each other in a horizontal direction of the feed passage (ref. no 18; col 3, line 59 to col 4, line 18),

- delivery means for collecting shredded tobacco in the separation chute and delivering it to an intermediate portion of the separation passage, the delivery means sealing a junction between the separation chute and separation passage (ref. no. 17; col 3, lines 57-63),

- an introducing means for causing a flow of air flowing toward said feed passage to be produced in said separation passage at a higher level than the intermediate

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portion thereof (ref. nos. 19 and 21; col 3, line 66 to col 4, line 11). The flow of air toward said feed passage would allow outside air to be introduced to the separation passage from the lower end opening.

Kazuichi et al discloses a cut tobacco feeder for a cigarette producing apparatus (Figs 1-2) comprising:

a feed passage extending to the tobacco band of the cigarette manufacturing machine (ref. no. 5; p 2, par 2; p 4, par 12),

supply means causing the shredded tobacco to fall to an inlet of the feed passage (ref. nos. 4, 6 and 8; p 2, par 2; p 4, par 12),

pneumatic transport means for producing a flow of air in the feed passage toward the suction surface of the tobacco band (ref. nos. 14, 16 and 18; p 4, par 13),

a separation chute having an upper end opening in the vicinity of the feed passage inlet (ref. nos. 40 and/or 42; p 2, par 2; p 5, par 15),

a separation passage opening into the feed passage downstream of the separation chute and having a lower end opening downward and having front and rear walls apart from each other in a horizontal direction of the feed passage (ref. nos. 44 and bounded by front and rear walls 56 and 58; p 2, par 2; p 5, pars 17 and 18),

delivery means for collecting shredded tobacco in the separation chute and delivering it to an intermediate portion of the separation passage, the delivery means sealing a junction between the separation chute and separation passage (ref. nos. 50 and 52; p 2, par 2; p 5, par 16),

an introducing means for causing a flow of air flowing toward said feed passage to be produced in said separation passage at a higher level than the intermediate portion thereof (p 4, par 13), and

a movable front wall in the separation passage (ref. no. 56; p 5, par 18).

Brand et al and Kazuichi et al do not disclose a detection means or a removing means for accumulations of shredded tobacco in the separation passage.

Okumoto et al disclose a shredded tobacco feeder for a cigarette producing apparatus comprising a feed path through which shredded tobacco passes to the cigarette conveyor of the cigarette making machine. Okumoto et al teaches that tobacco pieces can accumulate in the feed path and cause clogging and subsequent shut down or damage of the apparatus. A detection device monitors the path and produces an alarm signal stopping the machine when a plug is detected (Abs; p 2, lines 1-35). The detection device can be a photoelectric reflective type detector that emits light from one wall and senses the light reflected back from the opposite wall. Alternatively, the photoelectric device can emit light from one wall and sense the light with an optical sensor on the opposite wall (p 6, line 27 to p 7, line 26; Figs 6a-d). The two types of detection device are analogous to the claimed devices.

Okumoto et al does not disclose the use of a mirror on a wall opposite the light emitting portion of the detection device. Okumoto does not disclose an air blowing means for ejecting air along one of the light emitting/receiving or mirror surfaces. Okumoto does not disclose a removing means for accumulations of shredded tobacco.

Labbe et al discloses a cigarette making machine comprising a steeply sloping feed channel through which shredded tobacco passes in a downward direction before being fed to a tobacco band (Fig. 1, ref. no. 40; col 3, line 49 to col 4, line 5). The height of the tobacco in the feed channel is controlled by photoelectric sensors, which vary the rate at which tobacco is fed to the channel (col 4, lines 6-10). In addition, one wall of the channel can be vibrated to facilitate the feed of tobacco through the channel (col 3, lines 63-65).

Labbe et al does not disclose the use of a mirror on a wall opposite the light emitting portion of the detection device. Labbe et al does not disclose an air blowing means for ejecting air along one of the light emitting/receiving or mirror surfaces.

Rossi discloses a packaging machine to form, fill and seal flexible pouches (Abs; col 1, lines 9-14). The pouches are filled by material that drops through a feed pipe and into the pouch (col 8, lines 61-68). When the material tends to form clogs, a vibrating device vibrates an element of the fill or storage mechanism to loosen the clog (a removing means for accumulations of clogging material) (col 9, lines 13-18).

The art of Brand et al, Kazuichi et al, Okumoto et al, Labbe et al, Rossi and the instant invention are analogous as pertaining to the transport of shredded tobacco or other in a cigarette making apparatus or to removing clogs in gravity feed channels. In the Background Art portion of the instant Specification, the problem of stagnation of

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tobacco shreds, potentially leading to clogging, in the widthwise opposite regions of the passage is admitted to be known in prior art (p 2, lines 6-32). The cited prior art demonstrates that it is well known in the art to use the "line of detection" of optical sensors to detect tobacco accumulation for purposes of controlling flow and for detection of potential stagnation or clogging. It would have been obvious to one of ordinary skill in the art to use photoelectric detectors to detect if tobacco shreds were accumulating in the separation passage in the tobacco feeding apparatus of Brand et al or Kazuichi et al in view of Okumoto et al and further in view of Labbe et al and Rossi to prevent catastrophic shutdown of the process or damage to the apparatus. The use of a mirror in the opposite wall from a photoelectric reflective type detector would have been obvious to provide as good of a reflection as possible. It would also have been obvious to one of ordinary skill in the art at the time of the invention to locate and direct the "line of detection" of the sensors so as to impinge on any developing stagnation or clogging of the separation chute. Employing a stream of puffs of air to keep the light emitting/receiving or mirror surfaces clean would have been an obvious step to ensure accurate sensor operation. While the detectors in the process of Okumoto et al shut down the apparatus when a plug is detected, an alarm to notify the operator would be an obvious step as well. It would also have been obvious to use vibration of at least one wall of the separation passage as a well known means to loosen potential clogs and aid in the transport of the tobacco pieces through the passage.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DRC


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700